

REMARKS

Claims 1-10, 12-21, 23-29, 32-34 are pending in the application.

Claim 25 is amended above to correct a typographical error. No new matter is added to the application by this claim amendment.

I. TRAVERSE OF THE 103 REJECTION OF CLAIMS 1-10, 12-14 AND 23-29

The examiner rejected claims 1-10, 12-14 and 23-29 as obvious over Biel in view of Heeger et al. The examiner's rejection is traversed at least because the examiner has failed to articulate, as the examiner must, where each of the claim elements is disclosed or suggested by the prior art. In particular, the examiner's rejection ignores meaningful claim limitations and makes no attempt to demonstrate where the claim limitations are found in the cited prior art.

A. The Examiner Has Not Provided A Legally Sufficient Factual Basis For This Obviousness Rejection

Claim 1 is an independent claim and claims 2-10, 12-14 and 23-29 depend directly or indirectly upon claim 1. Claim 1 is directed to a medical sensor including a flexible light emitting diode formed upon regions of a flexible substrate and flexible photo-detectors formed upon respective regions of a flexible substrate. The examiner has not made out a prima face case of obviousness because the examiner has made no factual findings in the Office Action concerning the presence of either of (1) "flexible" photo-detectors; (2) photo-detectors formed on a "flexible substrate" ; or (3) the formation of flexible light emitting diodes and/or photo-detectors upon a flexible substrate of claim 1. For this reason alone the examiner's obviousness rejection is legally insufficient and must be withdrawn.

In addition, the examiner has failed to satisfy the burden of providing a factual basis as to where the features of dependent claims 2-5, 9-10 and 23-29 are found in the cited prior art. That is because the examiner has provided absolutely no factual basis for the rejection of these claims for obviousness in the October 2, 2009 Office Action. If Examiner maintains rejection of all claims then he should provide proper factual basis for the rejection in respect of each claim so that these can be addressed in the next response.

B. Claims 1-10, 12-14 and 23-29 Are Non-Obvious And Patentable

It would be impossible for the examiner to provide a prima facie case of obviousness because the cited art does not disclose or suggest all of the features of independent claim 1. In particular, the examiner takes the position that Biel discloses many of the claim 1 features except for flexible light emitting diodes. The examiner relies upon Heeger et al for disclosing flexible LEDs. However, Biel lacks more than just a teaching of flexible LED's. Biel – and Heeger for that matter - fail to disclose forming either flexible light emitting diodes or flexible photo-detectors upon a flexible substrate as claimed. Instead Biel teaches that VCSEL, LEDs, optical fibres, etc. are “*disposed in an array and adhered or mounted within a substrate*” (p.3 Para.45). For at least this reason, claims 1-10, 12-14 and 23-29 are patentable over the cited prior art.

Another reason that these claims are non-obvious is because the prior art, when combined, would not result in the claimed invention. If one skilled in the art at the time of the invention combined the teaching of Biel with that of Heeger, as Examiner proposes, then one would be still led to a device in which visible-light flexible LED's were still disposed in arrays and then adhered or mounted within a substrate. In contrast, independent claim 1 requires that both flexible light sources and light detectors be formed upon the substrate itself which is not found in the cited prior art. Claims 1-10, 12-14 and 23-29 are non-obvious for this reason as well.

II. TRAVERSE OF THE 103 REJECTION OF CLAIMS 15-21 AND 32-24

The examiner rejected claims 15-21 and 32-34 for being obvious over Biel and Heeger et al. as applied to the claims in Section I above and in further view of Bazan (USPA 2005/0035346) and Lai (USP 6,210,401). In particular, the examiner relies upon Bazan for disclosing the use of triplet emitting LEDs and upon Lai for disclosing the use of wavelength converters such as gratings or prisms in light therapy devices.

Claims 15-21 and 32-24 are non-obvious and patentable at least for the same reasons given above with respect to the patentability of claims 1-10, 12-14 and 23-29. In particular, claims 15-21 are patentable at least by virtue of their dependence upon independent claim 1.

Claims 32-34 are non-obvious and patentable at least because the cited prior art does not disclose or suggest the combination of a diode that emits in the claimed light range and a

wavelength converter that converts light to the claimed wavelength of independent claim 32. In addition, the cited prior art does not disclose the wavelength converting layer of independent claim 32 much less the wavelength converter of claim 33 that is a phosphor compound layer or the wavelength-converting layer of claim 34 that is an infra-red edge filter. That is because the Lai reference – which the examiner appears to rely upon for providing this teaching - is directed to a method and apparatus for corneal surgery and, once again, the skilled person would not be drawn to the disclosure if seeking an improved medical sensor. Once again Examiner admits the devices disclosed are therapy devices (rather than sensors as we claim). Furthermore the cited arrangements of optical elements are quite unsuitable in the present arrangements and are provided in the context of providing laser energy for ablating the surface of the cornea. Using such arrangements for a medical sensor as claimed would lead to inappropriate damage to a portion of a patient's body rather than merely monitoring it.

Conclusion

All pending application claims are believed to be patentable at least for the reasons recited above. Favorable reconsideration and allowance of all pending claims is, therefore, courteously solicited.

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